

AMENDMENTS TO CLAIMS

Applicants cancel claims 1 – 44, and add new claims 45 – 60, which correspond generally to claims 1 – 12.

LISTING OF CLAIMS

Claims 1 – 44 (cancelled)

Claim 45 (new): A method for producing a protein by *in vitro* translation, comprising:

- a) incubating an animal cell extract with a ribonucleic acid template having both a 5' cap and a 3' poly A tail under conditions such that translation of said ribonucleic acid template produces an encoded protein; and
- b) producing said encoded protein in an amount greater than the total of
 - i) the amount of encoded protein that is produced from a corresponding ribonucleic acid template having a 5' cap but no 3' poly A tail, plus
 - ii) the amount of encoded protein that is produced from a corresponding ribonucleic acid template having a 3' poly A tail but no 5' cap.

Claim 46 (new): The method of claim 45, wherein said animal cell extract is a mammalian cell extract.

Claim 47 (new): The method of claim 46, wherein said mammalian cell extract is a human cell extract.

Claim 48 (new): The method of claim 45, wherein said animal cell extract is an insect cell extract.

Claim 49 (new): The method of claim 48, wherein said insect cell extract is a *Drosophila* cell extract.

Claim 50 (new): The method of claim 49, wherein said *Drosophila* cell extract is a *Drosophila* embryo cell extract.

Claim 51 (new): The method of claim 50, wherein said *Drosophila* embryo cell extract is prepared by a method comprising dechorionating *Drosophila* embryos in an aqueous isotonic buffer comprising detergent and bleach.

Claim 52 (new): The method of claim 51, wherein said detergent is Triton X-100 and said bleach is sodium hypochlorite.

Claim 53 (new): The method of claim 51, further comprising after dechorionation, the steps of washing said embryos, homogenizing said embryos to produce a homogenate, centrifuging said homogenate, and recovering a *Drosophila* embryo cell extract as the non-pelleted material from said centrifuged homogenate.

Claim 54 (new): The method of claim 52, further comprising after dechorionation, the steps of washing said embryos, homogenizing said embryos to produce a homogenate, centrifuging said homogenate, and recovering non-pelleted material from said centrifuged homogenate.

Claim 55 (new): The method of claim 49, wherein said *Drosophila* cell extract is a *Drosophila* ovary cell extract.

Claim 56 (new): The method of claim 55, wherein said *Drosophila* ovary cell extract is prepared by a method comprising:

- (a) obtaining *Drosophila* ovaries in isotonic medium;
- (b) washing said ovaries so as to transfer said ovaries slowly from isotonic medium to hypotonic medium, resulting in an increase in volume of said ovaries;
- (c) homogenizing said washed ovaries to produce a homogenate;
- (d) centrifuging said homogenate; and
- (e) recovering a *Drosophila* ovary cell extract as the non-pelleted material from said centrifuged homogenate.

Claim 57 (new): The method of claim 45, wherein said conditions comprise the presence of creatine phosphate, creatine kinase, potassium and magnesium salts, spermidine, amino acids, a reducing agent, and tRNA.

Claim 58 (new): The method of claim 45, wherein said conditions comprise a temperature between about 18 degrees Celsius to about 37 degrees Celsius.

Claim 59 (new): The method of claim 58, wherein said conditions comprise a temperature of about 25 degrees Celsius.

Claim 60 (new): The method of claim 45, wherein said incubating is for at least about 90 minutes.